

Expert Report of David McDowall, Ph.D.

Oregon Firearms Federation, Inc., et al. v. Koteck, et al.

Fitz, et al. v. Rosenblum, et al.

Eyre, et al. v. Rosenblum, et al.

Azzopardi, et al. v. Rosenblum, et al.

Case No: 2:22-cv-01815-IM (lead)

3:22-cv-01859-IM

3:22-cv-01862-IM

3:22-cv-01869-IM

United States District Court, District of Oregon

March 8, 2023

Background & Expert Qualifications

I am a Professor in the School of Criminal Justice, University at Albany, State University of New York, where I have served since 1996. I have also been a faculty member in the Sociology Department at the University of Buffalo, State University of New York; and in the Department of Criminology and Criminal Justice at the University of Maryland. I received my doctorate in sociology from Northwestern University in 1980, and I was a National Institute of Mental Health postdoctoral fellow at the University of Michigan from 1980 to 1982.

I am a Fellow of the American Society of Criminology, and I am currently Lead Co-Editor of the Society's journal, *Criminology*. I have also served as Editor of the *Journal of Quantitative Criminology*; Associate Editor of the *Journal of Research in Crime and Delinquency*; and on the editorial boards of other scholarly journals. I review articles for a range of journals in sociology, criminology, and public health and medicine; book manuscripts for several publishers; grant proposals for various governmental and private funding agencies; and tenure and promotion cases for other universities.

I have published scholarly research articles in the leading professional journals of several fields. These include, among others, the *American Sociological Review*, *American Journal of Sociology*, *Social Forces*, *Criminology*, *Journal of Quantitative Criminology*, *Law & Society Review*, *Journal of Research in Crime and Delinquency*, *Public Opinion Quarterly*, *New England Journal of Medicine*, *American Journal of Preventive Medicine*, and *American Journal of Public Health*. I am in addition the coauthor or co-editor of four books.

My principal instructional responsibility is to teach courses in methods of statistical data analysis to doctoral students attending Rockefeller College at the University at Albany, State University of New York.

My research has involved several distinct areas, including the social distribution of criminal violence, crime measurement, and crime trends. Most pertinent to this declaration, I have extensively studied firearm policies and their outcomes. My firearm policy research has included evaluations of mandatory sentencing laws for firearm crimes and studies of the impact

of lenient concealed handgun carry laws on homicide rates. I have also evaluated the quality of surveys on firearm use and estimates of the frequency of armed defenses by civilians.

A full list of my qualifications is found in the curriculum vitae attached as Exhibit A. I note that I have not provided expert testimony in any cases during the last four years. I have been retained as an expert by the State of Oregon defendants in *Oregon Firearms Federation, Inc., et al. v. Kotek, et al.* and the related cases. My hourly rate for my work in this matter is \$200 per hour.

Summary of Expert Opinion

In the following sections I will first discuss estimates of the frequency of defensive gun use from a survey conducted by Dr. Gary Kleck and Marc Gertz (1995). The large size of these estimates and those from similar studies has resulted in questions about their accuracy. Most concerns about the Kleck and Gertz survey have involved the details of its methodology, and I broadly address these issues in Section A below. In Section B, I consider a different and more basic set of issues involving the validity of the Kleck and Gertz estimates. Specifically, inferences from the survey do not even approximately match what other sources report about the frequency of crime. I suggest in Section C that the source of the improbable estimates from the Kleck and Gertz survey stem from the central question that it poses to respondents. This question has the potential to invite positive responses due to a range of actions that is much wider than self-defense, and some of which may themselves be criminal. The survey then wildly overestimates the frequency of its intended target: civilian defensive firearm uses against criminal victimizations.

Overview of Dr. Gary Kleck's Estimates of the Frequency of Defensive Gun Use

Gary Kleck and Marc Gertz (1995) estimated that approximately 2.5 million cases of gun defense occurred annually in the United States.¹ Since then, Dr. Kleck has called attention to results from similar surveys that provide estimates of between 600,000 and 3.7 million cases of armed defense.² Not all of these surveys used exactly the same methods as did Kleck and Gertz, but they were all based on national probability samples and they all asked questions that were identical or nearly identical to those in the Kleck and Gertz survey. Dr. Kleck discusses them in a context that suggests he views them as replications or near replications of his work. Although the range of estimates in these surveys is uncomfortably broad, all of the estimates are large compared with the frequency of crime. Multiple researchers have accordingly questioned them.³

In my opinion, significant new intellectual contributions to this debate ended before 2010, and later discussions simply repeat the earlier points. Dr. Kleck's most recent contributions, in 2018

¹ Kleck, G. and Gertz, M., "Armed Resistance to Crime: The Prevalence and Nature of Self-Defense With a Gun," *Journal of Criminal Law and Criminology*, Vol. 86, Issue 1, 1995, pp. 150-187.

² Kleck, G., "Response Errors in Surveys of Defensive Gun Use: A National Internet Survey Experiment," *Crime & Delinquency*, Vol. 64, Issue 9, 2018, pp. 1119-1142.

³ Cook, P. & Ludwig, J., "Defensive Gun Uses: New Evidence from a National Survey," *Journal of Quantitative Criminology*, Vol. 14, No. 2, 1998, pp. 111-131. Cook, P, Ludwig, J, & Hemenway, D. "The Gun Debate's New Mythical Number: How Many Defensive Uses Per Year?" *Journal of Policy Analysis and Management*, Volume 16, 1997, pp. 463-469. Hemenway, D., "Survey Research and Self-Defense Gun Use: An Explanation of Extreme Overestimates," *Journal of Criminal Law and Criminology*, Vol. 87, Issue 4, 1997, pp. 1430-1445

and 2021, amount to little more, I believe, than rehashing some of his previous claims.⁴ A 2005 report by the National Academy of Sciences (Wellford, Pepper, and Petrie, 2005) contains a chapter on Dr. Kleck's estimates.⁵ I think that this chapter offers a reasoned summary of the estimates and the concerns about them.

Before I summarize my concerns with Dr. Kleck's estimates and the estimates of similar surveys, I wish to oppose Dr. Kleck's statements in his deposition for *Oregon Firearms Federation, Inc., et al. v. Brown, et al.* regarding criticisms of his work.

In the deposition, Dr. Kleck says: "I would say there's some scholars who are committed ideologically to the principle that there are very few defensive gun uses, and it colors their judgements. But is there any scholarly evidence, a scholarly basis for doubt about defensive gun use frequency? No."⁶ On the same page, he says: "I've explained in detail and on many occasions for decades exactly why those criticisms are invalid, and those making the criticisms respond by simply pretending they don't—they haven't heard those responses. I just—they don't have a rebuttal."⁷

I believe that these statements are flatly wrong. Many scholars have criticized Dr. Kleck's estimates on logical and factual grounds.⁸ They have responded to his objections—which often amount to repeating his original claims using more strident language—carefully and patiently. They have provided a solid intellectual basis for doubting his estimates.

Review of Survey Estimates

A. Issues involving survey methodology.

Scholars have criticized Dr. Kleck's surveys and similar surveys due to concerns with the underlying survey methodologies. The criticisms involve the wording of the questions that the surveys pose, respondents' possibly faulty memories about the time periods that the questions cover, and other methodological issues.⁹ They also include possible biases from nonresponses and from desires to give socially desirable answers.¹⁰ Smith (1997) offers a thorough discussion of these possibilities.¹¹ Dr. Kleck's 2018 article addresses some of these biases and provides

⁴ Kleck, G., "Response Errors in Surveys of Defensive Gun Use: A National Internet Survey Experiment," *Crime & Delinquency*, Vol. 64, Issue 9, 2018, pp. 1119-1142.; Kleck G., "What do CDC's surveys say about the prevalence of defensive gun use?" *American Journal of Criminal Justice*, Vol 46, 2021, pp. 401-421.

⁵ Wellford, C., Pepper, J., and Petrie, C., "Firearms and Violence: A Critical Review," National Research Council of the National Academies, Ch. 52005, pp.102-119.

⁶ 1/25/23 Dep. of G. Kleck, at 75:2-7.

⁷ *Id.* at 75:20-24.

⁸ Wellford, C., Pepper, J., and Petrie, C., "Firearms and Violence: A Critical Review," National Research Council of the National Academies, Ch. 52005, pp.102-119.

⁹ *Id.*

¹⁰ Wellford, C., Pepper, J., and Petrie, C., "Firearms and Violence: A Critical Review," National Research Council of the National Academies, Ch. 5, pp.102-119.

¹¹ Smith, T., "A Call for a Truce in the DGU War," *Journal of Criminal Law & Criminology*, Vol. 87, No. 4, 1997, pp. 1462-1469.

evidence that they do influence responses.¹² It seems improbable to me, however, that these factors are enough to account for the very large numbers of reported defenses.

A more likely explanation is that, as Hemenway (1997) and Cook and Ludwig (1998) have pointed out, response errors can substantially inflate frequency estimates of rare outcomes.¹³ Simply put, for rare outcomes, many more opportunities exist for a false positive response (here, a false report of a gun defense) than for a false negative response.

Although survey methods pose a threat to Dr. Kleck's estimates, even surveys using clearly weaker methods have produced results much like Dr. Kleck's when they asked respondents questions like those in the Kleck and Gertz survey. In a recent survey of armed defense that used the Kleck and Gertz questions, English (2021) obtained an estimate of 1.67 million annual incidents.¹⁴ The English survey apparently used a voluntary internet sample of respondents, and not the type of probability-based method that would allow inferences to the US population. In his deposition, Dr. Kleck dismissed English's survey for this reason, saying, "I don't think you can rely on it."¹⁵ Still, the English estimates are comfortably within the range of values provided by the surveys that Dr. Kleck prefers. This suggests perhaps that the question in the Kleck and Gertz survey is more important in generating the large number of defenses than are methodological issues.

I take up this matter in section C. First, however, I will discuss the improbability of the estimates from Kleck and Gertz and similar surveys.

B. Lack of correspondence to facts about crime and criminal events.

The validity of Dr. Kleck's estimates of defensive gun use based on his and similar surveys have also been questioned due to their lack of correspondence to facts known about the number of crimes and criminal events. Observing every claimed instance of armed self-defense is of course impossible, and this is the only certain method for judging validity issues. Still, the estimates have implications for other bodies of data. If the estimates match well with other facts about crime, they gain credibility. If they do not match, they lose credibility. Dr. Kleck's estimates are a poor match to many other facts.

For example, in a near-identical replication of the original Kleck and Gertz survey, Cook and Ludwig (1998) compared their estimates of the frequency of armed defenses to the frequency of criminal victimizations.¹⁶ They found that, when the sample was extrapolated to the national

¹² Kleck, G., "Response Errors in Surveys of Defensive Gun Use: A National Internet Survey Experiment," *Crime & Delinquency*, Vol. 64, Issue 9, 2018, pp. 1119-1142.

¹³ Hemenway, D., "Survey Research and Self-Defense Gun Use: An Explanation of Extreme Overestimates," *Journal of Criminal Law and Criminology*, Vol. 87, Issue 4, 1997, pp. 1430-1445; Cook, P. & Ludwig, J., "Defensive Gun Uses: New Evidence from a National Survey," *Journal of Quantitative Criminology*, Vol. 14, No. 2, 1998, pp. 111-131.

¹⁴ English, W., *2021 National Firearms Survey*, Georgetown McDonough School of Business Research Paper No. 3887145, Available at SSRN, 2021 <https://ssrn.com/abstract=3887145>.

¹⁵ G. Kleck Depo. at 76:5-77:7.

¹⁶ Cook, P. & Ludwig, J., "Defensive Gun Uses: New Evidence from a National Survey," *Journal of Quantitative Criminology*, Vol. 14, No. 2, 1998, pp. 111-131.

level, the claimed number of gun defenses against rape exceed the total number of rape victimizations in the nation; that the claimed number of gun defenses against robberies was equal to almost half the robbery victimizations in the nation; and that the claimed number of gun defenses against aggravated assaults equaled one-fifth of all assault victimizations in the nation.¹⁷ The respondents to their survey also often believed that their actions prevented murders, totaling about 600,000 cases over a one-year period when they were expanded to the nation. In contrast, the annual number of homicide victims in the nation is closer to 20,000.¹⁸

Multiple additional departures from verifiable facts about crime also exist. For example, the Kleck and Gertz survey found that, weighted to reflect the nation's population, armed defenders shot and wounded more than 200,000 criminals annually.¹⁹ Hemenway reports that hospital emergency room data show that only about 100,000 people are typically treated for gunshot wounds in a year, however.²⁰ Hemenway also points out that surveys of jail inmates have found that 90 percent report going to hospitals for treatment after being wounded.²¹ Together, these external facts are difficult to square with Dr. Kleck's estimates.

These multiple discrepancies between Dr. Kleck's findings and other data sources do not necessarily invalidate the survey estimates. Possibly the other data in the comparisons are flawed, for example, and not the survey estimates. However, a more likely explanation is that respondents can clearly remember that they used a gun to defend themselves but have hazy memories about specific details of the incident. The defenses may have happened in perilous circumstances, for example, and respondents' recollections about the details of a defense might therefore be less accurate and less certain than the simple memory that one occurred. Dr. Kleck has been quick to point out these possibilities, and many of his critics acknowledge them as conceivable. Still, comparisons with external information could importantly support Dr. Kleck's estimates, and they consistently do not.

Dr. Kleck has had many other opportunities to defend his estimates if he wished to pursue them. For example, one might imagine that variations in defensive firearm use would correspond to variations in the crime rate. If so, defenses should be more frequent now than when Kleck and Gertz completed their survey, and they should also vary with the timing of the other surveys that Dr. Kleck cites. In addition, multiple states have changed their concealed firearm policies over time, giving more opportunities for gun defenses. Instead of implausibly arguing that surveys of the type he prefers consistently give the same estimates, he might obtain external validation by studying their variation. Unfortunately, he has to date not pursued this strategy.

C. Issues involving survey questions.

Another area of concern about Dr. Kleck's estimates involves the phenomena measured by the Kleck and Gertz survey and their relatives. This measurement is set by the question posed to

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ Kleck, G. and Gertz, M., "Armed Resistance to Crime: The Prevalence and Nature of Self-Defense With a Gun," *Journal of Criminal Law and Criminology*, Vol. 86, Issue 1, 1995, pp. 150-187.

²⁰ Hemenway, D., *Private Guns, Public Health*. Ann Arbor, MI: University of Michigan Press, 2008.

²¹ *Id.*

survey respondents. The questions that these surveys pose allow a variety of protective activities, and they are not clearly restricted to defenses against criminal victimizations. Rather, these questions do not define defensive gun use and, instead, invite positive responses based on the respondent's subjective belief regarding the type of activity that qualifies as a defensive gun use. Those responses can include, for example, preemptive actions in which respondents used firearms to protect against what they thought might be threats to their safety. In these cases the respondents would have acted quickly, often before they had clarity about the nature of the situation. If they were wrong, the acts that they believed to be defensive gun uses might have been unnecessary and perhaps even criminal themselves. Other instances of defensive gun use reported to the type of questions posed in these surveys could include target shooting, mere carrying of a firearm, or arming in response to a potential threat like a noise.

The inclusion of these types of false positives (that is, responses treated as defensive gun uses that were not defenses against criminal acts) suggests the desirability of a two-stage approach where the survey first clearly establishes that an attempted crime occurred and then asks about defenses against it. The National Crime Victimization Survey (NCVS) uses this approach. The US Bureau of the Census collects the NCVS data for the US National Institute of Justice. With the FBI's Uniform Crime Reports, the NCVS is one of the nation's two major sources of information on crime.

The NCVS asks a long series of questions about each reported offense, and it includes only reports that clearly involve an attempted or completed crime.²² It then asks about what victims did to protect themselves. The NCVS produces a much smaller estimate of firearm defense than do the surveys that Dr. Kleck prefers, and those estimates are clearly confined to defensive gun use in response to an actual crime. With differing survey versions and case definitions, McDowall and Wiersema found an average of 65,000 cases annually between 1987 to 1990; Rand found an average of 82,000 cases annually between 1987 and 1992; Cook, Ludwig, and Hemenway found an average of 108,000 cases annually between 1992 and 1994; and McDowall, Loftin, and Wiersema found an average of 116,000 cases per year between 1992 and 1994.²³

Dr. Kleck accounts for the differences between his estimates and the NCVS by speculating that NCVS respondents are untruthful.²⁴ He asserts that the respondents fear reporting gun use to government employees because they may not have legally owned their guns or have carried them outside permitted places. The surveys that Dr. Kleck prefers are all telephone surveys, and they contact potential respondents through random digit dialing. Survey personnel assure potential

²² McDowall, D., and Wiersema, B., "The Incidence of Defensive Firearm Use by US Crime Victims, 1987 through 1990." *American Journal of Public Health*, Volume 84, Number 12, 1994, pp. 1982-1984.

²³ Cook, P. J., Ludwig, J., and Hemenway, D., T. "The Gun Debate's New Mythical Number: How Many Defensive Uses Per Year?" *Journal of Policy Analysis and Management*, Volume 16, Number 3, 1997, pp. 463-469; Rand, M. *Guns and Crime* (NCJ-147003), Washington, DC, U.S. Bureau of Justice Statistics, 1994; McDowall, D., Wiersema, B., "The Incidence of Defensive Firearm Use by US Crime Victims, 1987 through 1990," *American Journal of Public Health*, Volume 84, Number 12, 1994, pp. 1982-1984; McDowall, D., Loftin, C., and Wiersema B., *Estimates of the Frequency of Firearm Self-Defense from the Redesigned National Crime Victimization Survey*, Discussion Paper 20, Violence Research Group, University of Maryland-University at Albany, 1998.

²⁴ Kleck, G., and Gertz, M., "The Illegitimacy of One-Sided Speculation: Getting the Defensive Gun Use Estimate Down." *Journal of Criminal Law and Criminology*, Volume 87, 1987, pp. 1446-1461.

respondents they are anonymous, and according to Dr. Kleck this makes them more inclined to be truthful.

This claim makes no sense to me. Federal law protects the confidentiality of respondents to the NCVS (and other federal surveys), and Census employees identify themselves by presenting official credentials. One might imagine that potential respondents would believe federal agents over unidentified telephone interviewers making unverifiable promises.

Another concern about the NCVS estimates is that the NCVS asks respondents to volunteer the actions that they took to protect themselves. In other words, if a respondent indicates they were a victim of an offense, the NCVS survey asks the respondent to identify the actions they took to protect themselves. The survey will continue to ask that question until the respondent indicates they cannot recall any further responsive action. The NCVS survey does not, however, directly ask about gun use, and this very likely produces an underestimate. The underestimate would have to be many multiples of the reported value to reach the levels of the other surveys, however.

To investigate whether the surveys that Dr. Kleck prefers capture a different universe of events than does the NCVS, McDowall, Loftin, and Presser (2000) conducted a survey experiment.²⁵ Half the respondents received the NCVS questions first, followed by questions from the other surveys. The other half of the respondents received their questions in the opposite order. The results showed that, regardless of order, respondents reported many more cases of defensive gun use to the other survey questions than to the NCVS questions.²⁶

These results are consistent with the idea that the major question that the surveys Dr. Kleck prefers include a wider range of activities than defenses against criminal victimizations. Although the survey experiments Dr. Kleck reports in his 2018 article did not use NCVS screening methods, he also attempted a variation on the NCVS two step approach.²⁷ Like McDowall and colleagues, he found that this yielded significantly fewer reports of firearm defense than did the type of questions that he prefers in his and similar surveys.²⁸ Unfortunately, he did not acknowledge the implications of this finding.

Conclusion

Much remains unknown about the frequency of defensive firearm use against crime. The 2005 report by a blue-ribbon committee of the National Academy of Sciences recommended a large-scale research program to clarify the issue.²⁹ Part of the project would involve efforts to develop accurate measures of firearm defenses accurately, and to understand what phenomena current

²⁵ McDowall, D., Loftin, C., and Presser, S., "Measuring Civilian Defensive Firearm Use: A Methodological Experiment." *Journal of Quantitative Criminology*, Volume 16, Number 2, 2000, pp. 1-19

²⁶ *Id.*

²⁷ Kleck, G., "Response Errors in Surveys of Defensive Gun Use: A National Internet Survey Experiment," *Crime & Delinquency*, Vol. 64, Issue 9, 2018, pp. 1119-1142.

²⁸ *Id.*

²⁹ Wellford, C., Pepper, J., and Petrie, C., "Firearms and Violence: A Critical Review," National Research Council of the National Academies, Ch. 52005, pp.102-119.

approaches are measuring. Unfortunately, none of this has come about, and as I noted at the outset, we know little or nothing more about gun defenses now than was true then.

Putting that aside, Dr. Kleck's estimate of the frequency of defensive gun use appears to be highly questionable, enough so that sensible persons would not place much stock in it. The estimate may plausibly be due to flaws in its methodological procedures; it has seemingly impossible implications when compared with external data; and evidence suggests that the range of behaviors that it includes goes well beyond lawful defensive protections against criminal victimization.

Executed on March 8, 2023, in Niskayuna, New York.

s/ David McDowall, Ph.D.

David McDowall, Ph.D.

Professor, School of Criminal Justice

University at Albany, State University of New York

1418811

December, 2022

VITAE

David McDowall

Address

School of Criminal Justice
University at Albany
135 Western Avenue
Albany, NY 12222

dmcdowall@albany.edu
(518) 442-5225

Education

Ph.D. 1980 Sociology, Northwestern University
M.A. 1975 Sociology, Northwestern University
B.S. 1973 Sociology, Portland State University

Current Position

Distinguished Teaching Professor, School of Criminal Justice, University at Albany,
SUNY, since 2014

Previous Positions

Professor (1996 - 2013), School of Criminal Justice, University at Albany, SUNY
Professor (1992 - 1996), Department of Criminology and Criminal Justice, University
of Maryland
Associate Professor (1990 - 1992), Department of Criminology and Criminal Justice,
University of Maryland
Associate Professor (1985 - 1990), School of Criminal Justice, University at Albany,
SUNY
Assistant Professor (1982 - 1985), Department of Sociology, University at Buffalo,
SUNY

NIMH Postdoctoral Fellow (1980 - 1982), Department of Sociology, University of Michigan

Awards and Honors

Criminology Teaching Award, American Society of Criminology (for career-length achievement), 2011

Fellow, American Society of Criminology, selected 2009

Chancellor's Award for Excellence in Teaching, State University of New York, 2005

President's Award for Excellence in Teaching, University at Albany, 2005

Award for Excellence in Graduate Student Development, University at Albany, School of Criminal Justice Graduate Student Association, 2002

Appreciation Award for Teaching, University at Buffalo, Sociology Graduate Student Association, 1985

Editorial Service

Lead Co-editor, *Criminology*, for volumes 56-61, 2018-2023

Editor, *Journal of Quantitative Criminology*, 2001-2008

Editorial Board, *Journal of Experimental Criminology*, 2005-Present

Editorial Board, *Journal of Quantitative Criminology*, 1995-2001, 2008-2020

Editorial Board, *Journal of Research in Crime and Delinquency*, 2013-2016

Editorial Board, *Criminal Justice 2000* (edited volumes), National Institute of Justice, 1998-2000

Editorial Board, *Criminology*, 1990-1997

Associate Editor, *Journal of Research in Crime and Delinquency*, 1989-1991

Other Professional Service

Committee on Law and Justice Statistics, American Statistical Association, member, 1996 - 2000

Graduate Program Information Committee, American Society of Criminology, member, 1997-1998

Michael J. Hindelang Award Committee, American Society of Criminology, member, 2003-2004

Publications Committee, American Society of Criminology, member, 2005-2007 (chair, *Criminology and Public Policy* editor search, 2006-2007)

Ad Hoc Committee on Workshops, American Society of Criminology, member, 2007- 2009

Teaching Award Committee, American Society of Criminology, member, 2012-2013, 2022-2023; chair, 2013-2014

Mentor Award Committee, American Society of Criminology, member, 2017-2018

Program Committee, American Society of Criminology annual meetings, 1997, 1999, 2000, 2003, 2008, 2010, 2012, 2017

Panel on Modernizing the Nation's Crime Statistics, National Academy of Sciences, member, 2013-2017

Steering committee, Data-PASS, Journal Editors Discussion Interface (JEDI), 2021 - Present

Grant proposal and technical report reviewer, American Statistical Association, Centers for Disease Control and Prevention, National Institute of Justice, National Research Council, National Science Foundation, Social Sciences and Humanities Research Council of Canada

Occasional ad hoc manuscript reviewer, 62 journals in criminal justice, sociology, political science, public health, statistics, and general science

External reviewer for promotion, tenure, security of employment, and reappointment cases, 36 reviews for 23 institutions

Invited instructor for lectures and short courses on data analysis, National Institute of Justice Data Resources Program, Ann Arbor, 1997

New York State Division of Criminal Justice Services, Albany, 2000

New York State Professional Development Program, Albany, 2003

American Society of Criminology Annual Meeting, Los Angeles, 2006

Key Centre for Ethics, Law, Justice and Governance, Griffith University, Brisbane, Australia, 2008

American Society of Criminology Annual Meeting, Philadelphia, 2009

CESSR Methods Workshop, Indiana University, 2010

American Society of Criminology Annual Meeting, San Francisco, 2014

Papers Presented at Professional Meetings (last ten years)

“Comparing Homicide Rates Using the UCR and NVSS.” Annual meeting of the American Society of Criminology, Atlanta, 2022. (With Colin Loftin and Min Xie)

“Comparing Homicide Counts and Rates in the UCR and the Vital Statistics.” Annual meeting of the American Society of Criminology, Chicago, 2021. (With Colin Loftin and Min Xie)

“The 2015 and 2016 U.S. Homicide Rate Increases in Context.” Annual meeting of the American Society of Criminology, San Francisco, 2019.

“Discrepancies in the Reporting of Homicides in US States, 1960-2013.” Annual meeting of the American Society of Criminology, Atlanta, 2018. (With Colin Loftin and Min Xie)

“Analysis of National and State Homicide Trends, 1960-2014.” Annual meeting of the American Society of Criminology, Philadelphia, 2017. (With Colin Loftin and Min Xie)

“Examining the Inevitability Hypothesis of Terrorism.” Annual meeting of the American Society of Criminology, New Orleans, 2016. (With Henda Y. Hsu and Bob Edward Vasquez)

“Using Multiple Sources to Estimate Homicides by Police Officers.” Annual meeting of the American Society of Criminology, New Orleans, 2016. (With Colin Loftin and Min Xie)

“Discussion of Why Collecting Data on Gun Violence is So Hard.” Joint Statistical Meetings, Chicago, 2016.

“Examination of the Relationship between Domestic and Foreign Attacks Against the U.S.” Annual meeting of the American Society of Criminology, Washington, DC, 2015. (With Henda Y. Hsu and Bob Edward Vasquez)

“Under-reporting of Justifiable Homicides Committed by Police Officers in the United States, 1976-2012.” Annual meeting of the American Society of Criminology, Washington, DC, 2015. (With Colin Loftin and Min Xie)

“The Accuracy of Supplementary Homicide Report Rates for Large U.S. Cities.” Annual meeting of the American Society of Criminology, San Francisco, 2014. (With Colin Loftin, Karise M. Curtis, and Matthew D. Fetzer)

“The International Homicide Decline?” (poster). Annual meeting of the American Society of Criminology, Atlanta, 2013. (With Karise M. Curtis)

“Assaultive Violence and Social Exclusion.” Annual meeting of the American Society of Criminology, Atlanta, 2013. (With Colin Loftin and Karise M. Curtis)

“Guns and Violence—What Do We Know and What Should We Do?” Annual meeting of the American Sociological Association, New York, 2013. (With Colin Loftin).

“Seasonal Variation in Homicides” (poster). Annual meeting of the American Society of Criminology, Chicago, 2012. (With Karise M. Carrillo)

“The Relationship between Murders of Police and Justifiable Homicides by Police, 1980 - 2010.” Annual meeting of the American Society of Criminology, Chicago, 2012. (With Colin Loftin and Robert Kaminski)

Publications

Books

1980 *Interrupted Time Series Analysis*. Sage University Paper Series on Quantitative Applications in the Social Sciences. Beverly Hills, CA: Sage. (With Richard. McCleary, Errol E. Meidinger and Richard A. Hay, Jr.)

1980 *Applied Time Series Analysis for the Social Sciences*. Beverly Hills, CA: Sage. (With Richard McCleary, Richard A. Hay, Jr. and Errol E. Meidinger)

1996 *Statistical Handbook of Violence in America*. Phoenix: Oryx. (Editor, with Adam Dobrin, Brian Wiersema and Colin Loftin)

2017 *Design and Analysis of Time Series Experiments*. New York: Oxford University Press. (With Richard McCleary and Bradley J. Bartos)

- 2019 *Interrupted Time Series Analysis*. New York: Oxford University Press. (With Richard McCleary and Bradley J. Bartos)

Journal Articles and Contributions to Collected Works

- 1979 "How a Regression Artifact Can Make *Any* Delinquency Intervention Program Look Effective." Pages 626-652 in L. Sechrest, S.G. West, M.A. Phillips, R. Redner, and W. Yeaton (editors), *Evaluation Studies Review Annual, Volume 4*. Beverly Hills, CA: Sage. (With Richard McCleary, Andrew C. Gordon and Michael D. Maltz)
- 1980 "An Artifact in Pretest - Posttest Designs." *Evaluation Review*, 4:225-240. (With Michael D. Maltz, Andrew C. Gordon and Richard McCleary)
- 1981 "'One With A Gun Gets You Two': Mandatory Sentencing and Firearms Violence in Detroit." *Annals of the American Academy of Political and Social Science*, 455:150-167. (With Colin Loftin)
- 1981 "Regression Artifacts in Correctional Program Evaluations." Pages 27-47 in S. E. Zimmerman and H. D. Miller (editors), *Corrections at the Crossroads: Designing Policy*. Beverly Hills, CA: Sage. (With Richard McCleary, Andrew C. Gordon and Michael D. Maltz).
- 1982 "The Police, Crime, and Economic Theory: An Assessment." *American Sociological Review*, 47:393-401. (With Colin Loftin)
- Reprinted, pages 10-25 in D. H. Bayley (ed.), *What Works in Policing*. New York, Oxford, 1998.
- 1982 "ARIMA Causal Models: An Introduction and an Application to Deterrence Research." Pages 135-148 in J. Hagan (editor), *Deterrence Reconsidered*. Beverly Hills, CA: Sage. (With Colin Loftin)
- 1982 "Federal Firearms Policy and Mandatory Sentencing." *Journal of Criminal Law and Criminology*, 73:1051-1060. (With Milton Heumann and Colin Loftin)

- 1983 "Collective Security and the Demand for Legal Handguns." *American Journal of Sociology*, 88:1146-1161. (With Colin Loftin)
- 1983 "Mandatory Sentencing and Firearms Violence: Evaluating an Alternative to Gun Control." *Law and Society Review*, 17:287-318. (With Colin Loftin and Milton Heumann)
- 1984 "The Deterrent Effects of the Florida Felony Firearm Law." *Journal of Criminal Law and Criminology*, 75:250-259. (With Colin Loftin)
- 1984 "A Time Series Approach to Causal Modeling: Swedish Population Growth, 1750-1849." *Political Methodology*, 10:357-375. (With Richard McCleary)
- 1984 "Conflict, Crime, and Budgetary Constraint: Police Strength in Detroit, 1927-1976." Pages 101-124 in T. J. McDonald and S. K. Ward (editors), *The Politics of Urban Fiscal Policy*. Beverly Hills, CA: Sage. (With Colin Loftin)
- Reprinted, pages 326-349 in E. H. Monkkonen (ed.), *Theory and Methods in Criminal Justice Research, Part 1*. Munich: K. G. Saur, 1992.
- 1985 "Collective Security and Fatal Firearms Accidents." *Criminology*, 23:401-416. (With Colin Loftin)
- 1986 "Poverty and Homicide in Detroit, 1926-1978." *Violence and Victims*, 1:23-34.
- 1986 "Gun Availability and Robbery Rates: A Panel Study of Large U.S. Cities, 1974-1978." *Law and Policy*, 8:133-148.
- 1986 "Fiscal Politics and the Police: Detroit, 1928-1976." *Social Forces*, 65:162-176. (With Colin Loftin)
- 1986 "Constructing an Index of Officially Recorded Crime: The Use of Confirmatory Factor Analysis." *Journal of Quantitative Criminology*, 2:237-250. (With Robert Nash Parker)

- 1987 "Collective Security and the Ownership of Firearms for Protection." *Criminology*, 25:47-62. (With Robert L. Young and Colin Loftin)
- 1988 "Criminalizing Delinquency: The Deterrent Effects of the New York Juvenile Offender Law." *Law and Society Review*, 22:521-535. (With Simon I. Singer)
- 1988 "The Analysis of Case-Control Studies in Criminology." *Journal of Quantitative Criminology*, 4:85-98. (With Colin Loftin)
- 1989 "Did Mandatory Firearm Ownership in Kennesaw Really Prevent Burglaries?" *Sociology and Social Research*, 74:48-51. (With Brian Wiersema and Colin Loftin)
- 1989 "Economic Change and Homicide in Detroit, 1926-1979." Pages 163-177 in T. R. Gurr (editor), *Violence in America: The History of Crime*. Newbury Park, CA: Sage. (With Colin Loftin and James Boudouris)
- 1991 "Firearm Availability and Homicide Rates in Detroit, 1951-1986." *Social Forces*, 69:1085-1101.
- 1991 "Preventing Homicide: An Evaluation of the Efficacy of a Detroit Gun Ordinance." *American Journal of Public Health*, 81:576-581. (With Patrick W. O'Carroll, Colin Loftin, John B. Waller, Alan Bukoff, Richard O. Scott, James A. Mercy and Brian Wiersema)
- 1991 "Effects of Restrictive Licensing of Handguns on Homicide and Suicide in the District of Columbia." *New England Journal of Medicine*, 325:1615-1620. (With Colin Loftin, Brian Wiersema and Talbert J. Cottey)

Related correspondence and discussion appear in *New England Journal of Medicine*, 326 (1992):1160, and in *New England Journal of Medicine*, 330 (1994):1158-1159.

Cited in *District of Columbia v. Heller*, 128 S. Ct. 2783 - Supreme Court 2008.

- 1991 "General Deterrence Through Civilian Gun Ownership: An Evaluation of the Quasi- Experimental Evidence." *Criminology*, 29:541-559. (With Alan J. Lizotte and Brian Wiersema)
- 1991 "Social Change and Crime Rates: An Evaluation of Alternative Theoretical Approaches." *Social Forces*, 70:165-185. (With Terance D. Miethe and Michael Hughes)
- 1992 "A Comparative Study of the Preventive Effects of Mandatory Sentencing Laws for Gun Crimes." *Journal of Criminal Law and Criminology*, 83:378-394. (With Colin Loftin and Brian Wiersema)

Reprinted, pages 521-538 in D. Weisburd and S. Bushway (eds.), *Quantitative Methods in Criminology*. Aldershot, UK: Ashgate, 2005.

- 1992 "Comparing the UCR and NCS Over Time." Invited commentary, *Criminology*, 30:125-132. (With Colin Loftin)
- 1993 "Gun Control." In C. Calhoun and G. Ritzer (editors), *Social Problems*. New York: McGraw-Hill. (With Alan J. Lizotte)

Reprinted, pages 35-50 in C. Calhoun and G. Ritzer (editors), *Perspectives on Sociology*. New York: McGraw-Hill, 1996.

Also reprinted, pages 1-16 in C. Calhoun and G. Ritzer (editors), *Perspectives on Criminal Justice*. New York: McGraw-Hill, 1996.

- 1993 "Contextual Effects in Models of Criminal Victimization." *Social Forces*, 71:741-759. (With Terance D. Miethe)
- 1993 "Evaluating Effects of Changes in Gun Laws." *American Journal of Preventive Medicine*, 9 Supplement:39-43. (With Colin Loftin and Brian Wiersema)
- 1993 "Guns, Southernness, and Gun Control." *Journal of Quantitative Criminology*, 9:289-307. (With Pauline G. Brennan and Alan J. Lizotte)

- 1994 "The Incidence of Defensive Firearm Use by US Crime Victims, 1987 Through 1990." *American Journal of Public Health*, 84:1982-1984. (With Brian Wiersema)

Abstracted in *JAMA*, 273 (1995):1730 f.

Reprinted, pages 315-321 in J. E. Dizard, R. M. Muth, and S. P. Andrews, Jr. (eds.), *Guns in America: A Reader*. New York: New York University Press, 1999.

- 1994 "Neighborhood Context and Delinquency: A Longitudinal Analysis." Pages 217-227 in E. G. M. Weitekamp and H. J. Kerner (editors), *Cross-National Longitudinal Research on Human Development and Criminal Behavior*. Dordrecht: Kluwer Academic. (With Alan J. Lizotte, Terence P. Thornberry, Marvin D. Krohn, and Deborah Chard-Wierschem)

- 1995 "Firearm Availability and Homicide Rates." Pages 304-307 in W. G. Bailey (editor), *Encyclopedia of Police Science*, second edition. New York: Garland.

A revised version appears in J. R. Greene (editor), *Encyclopedia of Police Science*, third edition. New York: Routledge, 2007, pages 530-535.

- 1995 "Firearms and Self-Defense." *Annals of the American Academy of Political and Social Science*, 539:130-140.

- 1995 "Easing Concealed Firearm Laws: Effects on Homicide in Three States." *Journal of Criminal Law and Criminology*, 86:193-206. (With Colin Loftin and Brian Wiersema)

Related correspondence and discussion appear in *Police*, September, 1995:11-12, and in *Journal of Criminal Law and Criminology*, 86 (1995):221-226.

Reprinted in part, pages 83-85 in M. Bijlefeld (editor), *The Gun Control Debate: A Documentary History*. Westport CT: Greenwood, 1997.

Reprinted, pages 452-464 in L. Nisbet (editor), *The Gun Control Debate: You Decide* (second edition). Amherst, NY: Prometheus, 2001.

Reprinted in part, pages 38-45 in S. H. Decker, L.F. Alarid, and C.M. Katz (editors), *Controversies in Criminal Justice*. Los Angeles: Roxbury, 2003.

- 1995 "Boot Camp Prisons and Recidivism in Eight States." *Criminology*, 33:327-357. (With Doris Layton MacKenzie, Robert Brame, and Claire Souryal)

Reprinted, pages 173-196 in Doris L. MacKenzie and Gaylene S. Armstrong (editors), *Correctional Boot Camps: Military Basic Training or a Model for Corrections?* Thousand Oaks, CA: Sage, 2004.

- 1996 "Reciprocal Causal Relationships Among Drug Use, Peers, and Beliefs: A Five-Wave Panel Model." *Journal of Drug Issues*, 26:405-428. (With Marvin D. Krohn, Alan J. Lizotte, Terence P. Thornberry, and Carolyn Smith)

- 1996 "Using Quasi-Experiments to Evaluate Firearm Laws: Comment on Britt et al.'s Reassessment of the D.C. Gun Law." Invited commentary, *Law and Society Review*, 30:381-391. (With Colin Loftin and Brian Wiersema)

Cited in *District of Columbia v. Heller*, 128 S. Ct. 2783 - Supreme Court 2008.

- 1998 "Fatal Firearm-Related Injury Surveillance in Maryland." *American Journal of Preventive Medicine*, 15 Supplement:46-56. (With Brian Wiersema, Colin Loftin, Robert C. Mullen, Erich M. Daub, Monique A. Sheppard, and John E. Smialek)

- 2000 "The Impact of Youth Curfew Laws on Juvenile Crime Rates." *Crime and Delinquency*, 46:76-91. (With Colin Loftin and Brian Wiersema)

- 2000 "Measuring Civilian Defensive Firearm Use: A Methodological Experiment." *Journal of Quantitative Criminology*, 16:1-19. (With Colin Loftin and Stanley Presser)

- 2000 "Measurement and Analysis of Crime and Justice: An Introductory Essay." Pages 1-31 in D. Duffee (editor), *Criminal Justice 2000, Volume 4, Measurement and Analysis of Crime and Justice*. Washington, DC: National Institute of Justice. (With David Duffee, Lorraine G. Mazerolle, and Stephen D. Mastrofski)
- 2000 "A Comparison of SHR and Vital Statistics Homicide Estimates for U.S. Counties." *Homicide Studies*, 4:317-340. (With Brian Wiersema and Colin Loftin)
- 2000 "Juvenile Curfew Laws and Their Influence on Crime." *Federal Probation*, 64:58-63.
- 2001 "Gun Control" and "National Rifle Association." In P. Boyer (editor), *The Oxford Companion to United States History*. New York: Oxford University Press. (With Alan J. Lizotte)
- 2002 "Tests of Nonlinear Dynamics in U.S. Homicide Time Series, and Their Implications." *Criminology*, 40:711-736.
- 2002 "Carrying Guns and Involvement in Crime." Pages 145-158 in R.A. Silverman, T.P. Thornberry, B. Cohen, and B. Krisberg (editors), *Crime and Justice at the Millennium: Essays by and in Honor of Marvin E. Wolfgang*. Boston: Kluwer Academic. (With Alan J. Lizotte, Trudy L. Bonsell, Terence P. Thornberry, and Marvin D. Krohn)
- 2002 "National Crime Victimization Survey (NCVS)." Pages 424-426 in G. L. Carter (editor), *Guns in American Society*. San Diego: ABC-CLIO.

A revised version appears in G. L. Carter (editor), *Guns in American Society*, second edition. San Diego: ABC-CLIO, 2012, pages 605-608.
- 2003 "Underreporting of Justifiable Homicides Committed by Police Officers in the United States, 1976-1998." *American Journal of Public Health*, 93:1117-1121. (With Colin Loftin, Brian Wiersema, and Adam Dobrin)

- 2003 “Comments on Deborah Azrael, Catherine Barber, David Hemenway, and Matthew Miller, ‘Data on Violent Injury.’” Invited commentary, pages 432-435 in J. Ludwig and P.J. Cook (editors), *Evaluating Gun Policy*. Washington, DC: Brookings.
- 2003 “Regional Culture and Patterns of Homicide.” *Homicide Studies*, 7:353-367. (With Colin Loftin)
- 2004 “Interrupted Time-Series Design.” In M. S. Lewis-Beck, A. E. Bryman, and T. F. Liao (editors), *The Sage Encyclopedia of Social Science Research Methods*. Thousand Oaks, CA: Sage.
- 2005 “The Polls-Review: John R. Lott Jr.’s Defensive Gun Brandishing Estimates.” *Public Opinion Quarterly*, 69:246-263.
- 2005 “Are U.S. Crime Rate Trends Historically Contingent?” *Journal of Research in Crime and Delinquency*, 42:359-383. (With Colin Loftin)
- 2006 “Here We Go Again—Can We Learn Anything from Aggregate-Level Studies of Policy Interventions?” Invited commentary, *Criminology and Public Policy*, 5:461-470. (With Shawn Bushway)
- 2006 “Prior Police Contact and Subsequent Victim Reporting: Results from the NCVS.” *Justice Quarterly*, 23:481-501. (With Min Xie, Greg Pogarsky, and James P. Lynch)
- 2007 “What is Convergence, and What Do We Know About It?” Pages 93 - 121 in J.P. Lynch and L.A. Addington (editors), *Understanding Crime Statistics: Revisiting the Divergence of the NCVS and the UCR*. New York: Oxford University Press. (With Colin Loftin)
- 2008 “A Comparison of SHR and Vital Statistics Homicide Estimates for U.S. Cities.” *Journal of Contemporary Criminal Justice*, 24:4-17. (With Colin Loftin and Matthew Fetzer)

- 2008 "Likely Errors When Linking Supplementary Homicide Report Records for Large U.S. Cities." *Homicide Studies*, 12:234-248. (With Colin Loftin and Min Xie)
- 2008 "The Effects of Residential Turnover on Household Victimization." *Criminology*, 46:539-575. (With Min Xie)
- 2008 "Escaping Crime: The Effects of Direct and Indirect Victimization on Moving." *Criminology*, 46:809-840. (With Min Xie)
- 2009 "Longitudinal Data and Their Uses." Pages 43-58 in M. Krohn, A. Lizotte, and G. Penly-Hall (editors), *Handbook on Criminology and Deviance*. New York: Springer Science + Business Media. (With Alan J. Lizotte and Nicole M. Schmidt)
- 2009 "Do U.S. City Crime Rates Follow a National Trend? The Influence of Nationwide Conditions on Local Crime Patterns." *Journal of Quantitative Criminology*, 25:307-324. (With Colin Loftin)
- 2010 "The Reproduction of Racial Inequality: How Crime Affects Housing Turnover." *Criminology*, 48:865-896. (With Min Xie)
- 2010 "The Present and Possible Future of Quantitative Criminology." *Journal of Quantitative Criminology*, 26:429-435.
- 2010 "The Use of Official Records to Measure Crime and Delinquency." *Journal of Quantitative Criminology*, 26:527-532. (With Colin Loftin)
- 2012 "Time Series Designs." Chapter 32 in H. Cooper (editor-in-chief.), *APA Handbook of Research Methods in Psychology: Volume 21*. Washington, DC: American Psychological Association. (With Richard McCleary)
- 2012 "Seasonal Cycles in Crime, and Their Variability." *Journal of Quantitative Criminology*, 28:389-410. (With Colin Loftin and Matthew Pate)

- 2013 "Zero-Inflated and Overdispersed: What's One to Do?" *Journal of Statistical Computation and Simulation*, 83:1671-1683. (With Suzanne E. Preumean-Chaney, Charity Morgan, and Immaculada Aban).
- 2014 "Interrupted Time Series Models." Pages 2653-2665 in G. Bruinsma and D. Weisburd (editors), *Encyclopedia of Criminology and Criminal Justice*. New York: Springer Science + Business Media. (With Richard McCleary)
- 2014 "Time Series Properties of Crime Rate Changes: Comments Related to David Greenberg's Paper." Invited commentary, *Justice Quarterly*, 31: 189-192.

Reprinted in R. Rosenfeld, K. Terry, and P. Chauhan (editors), *Understanding New York's Crime Drop*. New York: Routledge, 2020.
- 2014 "The Impact of Victimization on Residential Mobility: Explaining Racial and Ethnic Patterns Using the National Crime Victimization Survey." *Criminology*, 51:553-587. (With Min Xie)
- 2015 "The Accuracy of Supplementary Homicide Report Rates for Large U.S. Cities." *Homicide Studies*, 19:6-27. (With Colin Loftin, Karise M. Curtis, and Matthew D. Fetzer)
- 2015 "Quantitative Methods and Crime." Pages 733-735, volume 19, in J. Wright (editor-in-chief), *International Encyclopedia of the Social and Behavioral Sciences*, second edition. Oxford, UK: Elsevier.
- 2015 "How Effective Are Our 'Better Angels'? Assessing Country-Level Declines in Homicide Since 1950." *European Journal of Criminology*, 12:482-504. (With Gary LaFree and Karise M. Curtis)
- 2015 "Seasonal Variation in Homicide and Assault Across Large U.S. Cities." *Homicide Studies*, 19:303-325. (With Karise M. Curtis)
- 2016 "Does Recent Victimization Impact Confidence in the Criminal Justice System?" *Victims and Offenders*, 11:482-499. (With Jeanna M. Mastrocinque)

- 2017 "Underreporting of Homicides by the Police in the United States, 1976-2013." *Homicide Studies*, 21:159-174. (With Colin Loftin and Min Xie)
- 2017 "Does Target-hardening Result in Deadlier Terrorist Attacks against Protected Targets? An Examination of Unintended Harmful Consequences." *Journal of Research in Crime and Delinquency*, 54:930-957. (With Henda Y. Hsu)
- 2018 "A Time Series Analysis of Terrorism: Intervention, Displacement, and Diffusion of Benefits." *Justice Quarterly*, 35:557-563. (With Henda Y. Hsu and Bob Edward Vásquez)
- 2019 "The National Violent Death Reporting System and Police-Involved Firearm Deaths." Invited editorial, *American Journal of Public Health*, 109:537–538.
- 2019 "The 2015 and 2016 U.S. Homicide Rate Increases in Context." *Homicide Studies*, 23:225-242.
- 2020 "Examining the State Repression-Terrorism Nexus: Dynamic Relationships among Repressive Counterterrorism Actions, Terrorist Targets, and Deadly Terrorist Violence in Israel." *Criminology and Public Policy*, 19:483-514. (With Henda Y. Hsu)
- 2020 "A Deadlier Post-9/11 Terrorism Landscape for the USA Abroad: A Quasi-Experimental Study of Backlash Effects of Terrorism Prevention." *Journal of Experimental Criminology*, 16:607–623. (With Henda Y. Hsu and Bob Edward Vasquez)
- 2021 "Uniform Crime Reports." Pages 148-152, volume 1, in J.C. Barnes and David R. Forde (editors), *Encyclopedia of Research Methods in Criminology and Criminal Justice*. New York: Wiley.

Other Publications

- 1991 "Economic Risk Factors for Infant Homicide." Pages 273-276 in *Proceedings of the 1991 Public Health Conference on Records and Statistics*. Washington, DC: U.S. Department of Health and Human Services. (With Colin Loftin and Brian Wiersema)

- 1992 "Preventive Effects of Mandatory Sentencing Laws for Gun Crimes." Pages 87-94 in *Proceedings of the Social Statistics Section, American Statistical Association*. Washington, DC: American Statistical Association. (With Colin Loftin and Brian Wiersema)
- 1994 "Estimating the Effects of Firearm Regulations on Violence." Pages 32-34 in *Proceedings of the 1993 National Conference of the Bureau of Justice Statistics and the Justice Research Statistics Association*. Washington, DC: U.S. Department of Justice.
- 2001 Review of Philip J. Cook and Jens Ludwig, *Gun Violence: The Real Costs*. *New England Journal of Medicine*, 344: 1484-1485.
- 2013 "Graduate Statistics Instruction and the ASC Teaching Award." *The Criminologist*, 38(3): 1, 3-5.
- 2016 "Why Collecting Data on Gun Violence is So Hard." Pages 13-17 in *JSM Proceedings, Committee on Scientific Freedom and Human Rights*. Alexandria, VA: American Statistical Association.

ATTORNEY CERTIFICATE OF SERVICE

I hereby certify that on March 8, 2023, I have made service of the foregoing **EXPERT REPORT OF DAVID MCDOWALL** on the party listed below in the manner indicated:

Shawn M. Lindsay
Daniel J. Nichols
Christian Cho
JurisLaw LLP
Three Centerpointe Drive, Suite 160
Lake Oswego, OR 97035
Attorney for Eyre Plaintiffs

- ☐ U.S. Mail
☐ Facsimile
☐ Hand Delivery
☐ Overnight Courier
☒ Email: shawn@jurislawyer.com;
dan@jurislawyer.com;
christian@jurislawyer.com
☐ Electronically via USDC CM/ECF system

Matthew D. Rowen
Erin E. Murphy
Nicholas M. Gallagher
Paul D. Clement
Clement & Murphy, PLLC
706 Duke Street
Alexandria, VA 22314
Attorney for Eyre Plaintiffs

- ☐ U.S. Mail
☐ Facsimile
☐ Hand Delivery
☐ Overnight Courier
☒ Email: erin.murphy@clementmurphy.com;
nicholas.gallagher@clementmurphy.com;
matthew.rowen@clementmurphy.com;
paul.clement@clementmurphy.com
☐ Electronically via USDC CM/ECF system

Jessica A. Skelton
Zachary J. Pekelis
Kai Smith
W. Scott Ferron
Pacifica Law Group LLP
1191 Second Avenue, Suite 2000
Seattle, WA 98101-3404
*Attorneys for Proposed Intervenor-Defendant
Oregon Alliance for Gun Safety*

- ☒ U.S. Mail
☐ Facsimile
☐ Hand Delivery
☐ Overnight Courier
☒ Email:
jessica.skelton@pacificallawgroup.com;
zach.pekelis@pacificallawgroup.com;
kai.smith@pacificallawgroup.com;
scott.ferron@pacificallawgroup.com
☐ Electronically via USDC CM/ECF system

James L. Buchal
Murphy & Buchal
PO Box 86620
Portland, OR 97286
Attorney for Fitz Plaintiffs

- ☐ U.S. Mail
☐ Facsimile
☐ Hand Delivery
☐ Overnight Courier
☒ Email: jlbuchal@mbllp.com
☐ Electronically via USDC CM/ECF system

William Bergstrom
Cooper & Kirk, PLLC
1523 New Hampshire Avenue, NW
Washington, DC 20036

- ☐ U.S. Mail
☐ Facsimile
☐ Hand Delivery
☐ Overnight Courier

CERTIFICATE OF SERVICE

Attorney for Fitz Plaintiffs

- ☒ Email: wbergstrom@cooperkirk.com
☐ Electronically via USDC CM/ECF system

D. Angus Lee
 Angus Lee Law Firm, PLLC
 9105A NE HWY 99, Suite 200
 Vancouver, WA 98665
Attorney for Fitz Plaintiffs

- ☐ U.S. Mail
☐ Facsimile
☐ Hand Delivery
☐ Overnight Courier
☒ Email: Angus@AngusLeeLaw.com
☐ Electronically via USDC CM/ECF system

James L. Buchal
 Murphy & Buchal
 PO Box 86620
 Portland, OR 97286
Attorney for Azzopardi Plaintiffs

- ☐ U.S. Mail
☐ Facsimile
☐ Hand Delivery
☐ Overnight Courier
☒ Email: jbuchal@mbllp.com
☐ Electronically via USDC CM/ECF system

William Sack
 Firearms Policy Coalition, Inc.
 5550 Painted Mirage Road, Suite 320
 Las Vegas, NV 89149
Attorney for Azzopardi Plaintiffs

- ☐ U.S. Mail
☐ Facsimile
☐ Hand Delivery
☐ Overnight Courier
☒ Email: Wsack@FPClaw.org
☐ Electronically via USDC CM/ECF system

Adam Kraut
 Second Amendment Foundation
 12500 NE Tenth Place
 Bellevue, WA 98005
Attorney for Azzopardi Plaintiffs

- ☐ U.S. Mail
☐ Facsimile
☐ Hand Delivery
☐ Overnight Courier
☒ Email: akraut@saf.org
☐ Electronically via USDC CM/ECF system

D. Angus Lee
 Angus Lee Law Firm, PLLC
 9105A NE HWY 99, Suite 200
 Vancouver, WA 98665
Attorney for Azzopardi Plaintiffs

- ☐ U.S. Mail
☐ Facsimile
☐ Hand Delivery
☐ Overnight Courier
☒ Email: Angus@AngusLeeLaw.com
☐ Electronically via USDC CM/ECF system

Stephen J. Joncus
 Joncus Law LLC
 13203 SE 172nd Ave, Ste 166 #344
 Happy Valley, OR 97086
Attorney for OFF Plaintiffs

- ☐ U.S. Mail
☐ Facsimile
☐ Hand Delivery
☐ Overnight Courier
☒ Email: steve@joncus.net
☐ Electronically via USDC CM/ECF system

Leonard W. Williamson

- ☐ U.S. Mail

Van Ness Williamson
 960 Liberty Street SE, Suite 100
 Salem, OR 97302
Attorney for OFF Plaintiffs

- ☐ Facsimile
- ☐ Hand Delivery
- ☐ Overnight Courier
- ☒ Email: l.williamson@vwllp.com
- ☐ Electronically via USDC CM/ECF system

Pete Serrano
 Silent Majority Foundation
 5238 Outlet Drive
 Pasco, WA 99301
Attorney for OFF Plaintiffs

- ☐ U.S. Mail
- ☐ Facsimile
- ☐ Hand Delivery
- ☐ Overnight Courier
- ☒ Email: pete@silentmajorityfoundation.org
- ☐ Electronically via USDC CM/ECF system

Jessica A. Skelton
 Zachary J. Pekelis
 Kai Smith
 W. Scott Ferron
 Pacifica Law Group LLP
 1191 Second Avenue, Suite 2000
 Seattle, WA 98101-3404
*Attorneys for Proposed Intervenor-Defendant
 Oregon Alliance for Gun Safety*

- ☒ U.S. Mail
- ☐ Facsimile
- ☐ Hand Delivery
- ☐ Overnight Courier
- ☒ Email:
 jessica.skelton@pacificlawgroup.com;
 zach.pekelis@pacificlawgroup.com;
 kai.smith@pacificlawgroup.com;
scott.ferron@pacificlawgroup.com
- ☐ Electronically via USDC CM/ECF system